

Glase mtr
Chinati mtr.
Sierra del Norte
Guadalupe

1967

Texas
Monument sprgs. \square APS
top $\frac{1}{3}$

es. The spurs are truncated at
The hill at the left terminates
steep scarp, from which it slopes
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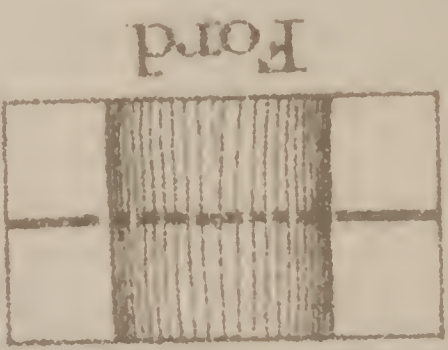
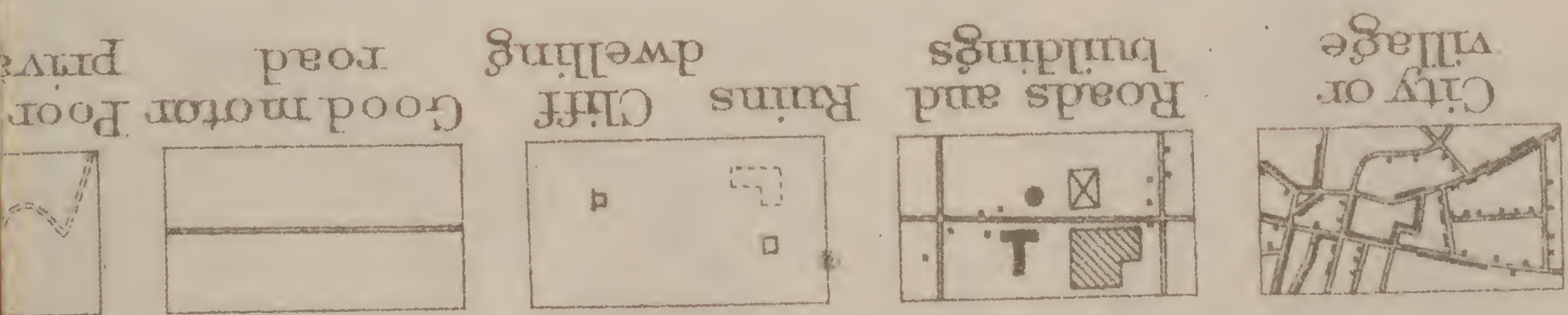




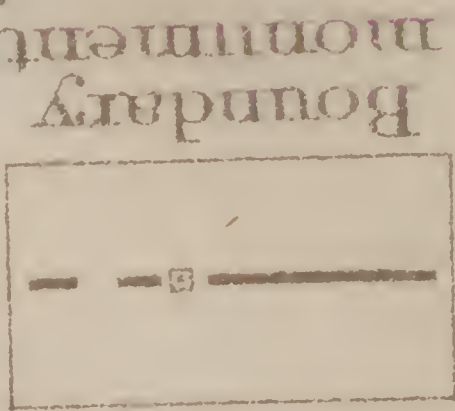
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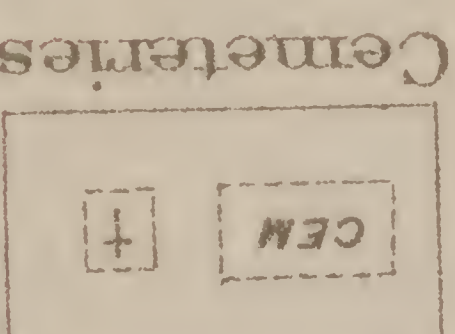
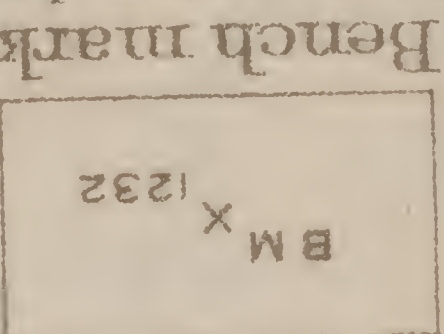
or larger. In addition to area covered by topographic maps about 11,300 square miles of southeastern Alaska has been covered by planimetric maps on scales of $\frac{1}{125,000}$ and $\frac{1}{250,000}$. The Hawaiian Islands have been surveyed, and the resulting maps are published on a scale of $\frac{1}{62,500}$.



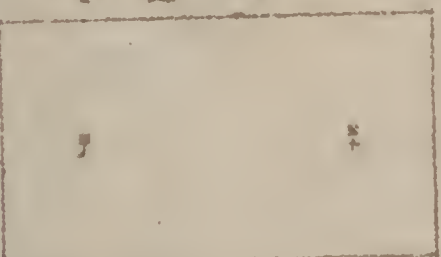
and river (point upstream) U.S.



monument (supplementary bench mark shown by cross and black figures without lettering)



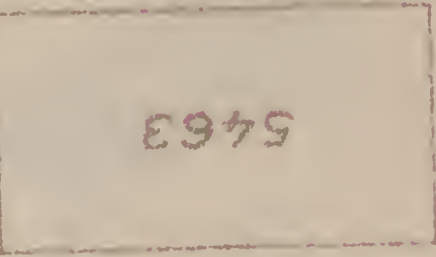
Church, School (distinguished on recent maps)



RELIEF

(printed in brown)

Elevation above mean sea level (in black on recent maps)



Contours showing depth of water (Contours showing depth of water printed in blue)



Depression contours



32
1160

90
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360'

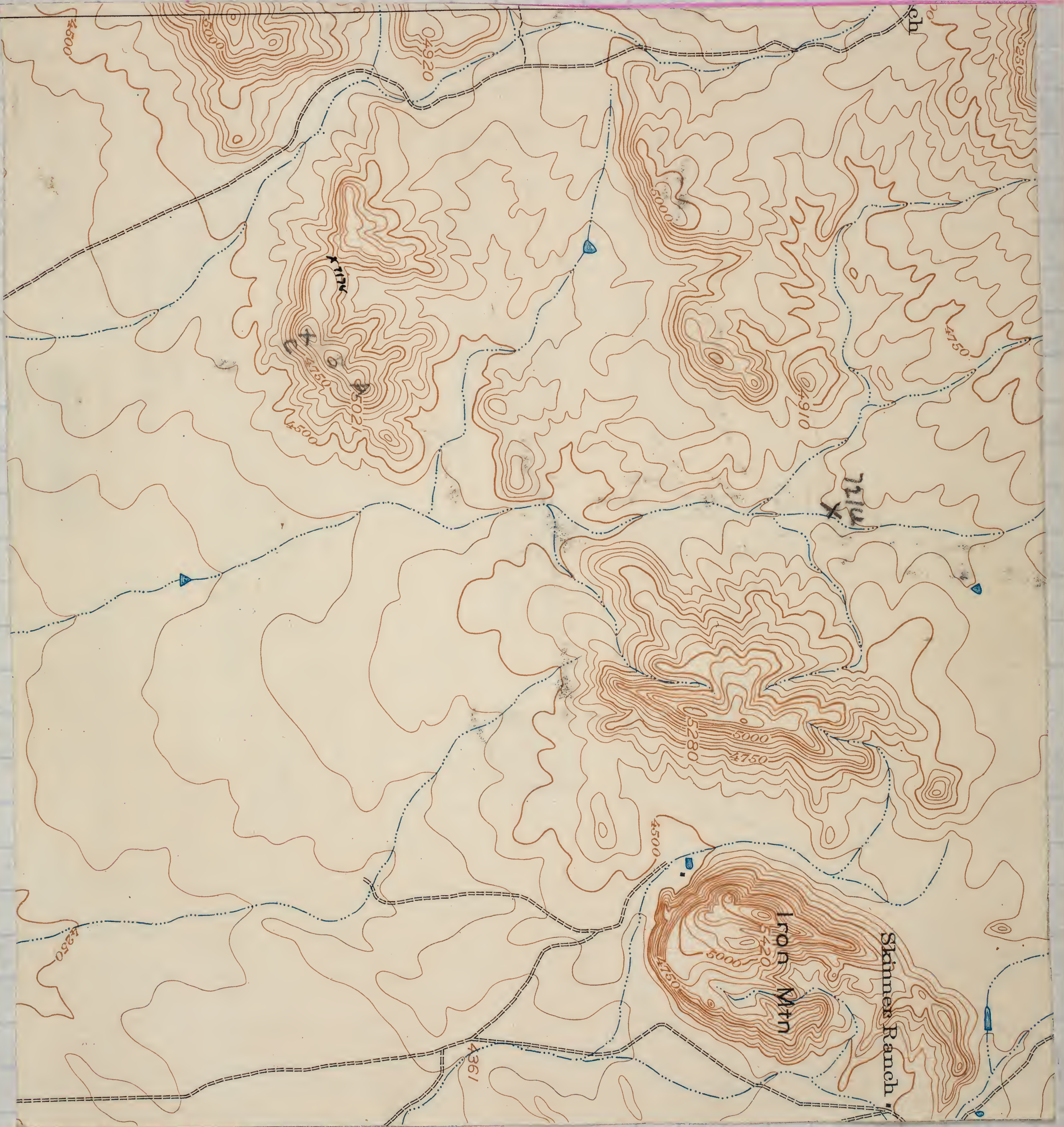
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(L)

March 11.7.

Left Washington on flight 157 (TWA) and landed in Albuquerque at about 2 P.M. about 1/2 hour late. Picked up car and boxes and went on to Socorro. Visited Flowers in evening. Went to Van Horn for night on the next day. On the 17th of March arrived in Marathon at noon. Went out to Dugout Mtn. Visited locality 733j. Unable to get more of the *Cerasinophora* bed. This is a fine bioherm with detrital beds wrapped over it.

739g = M1767 - a small bioherm near bottom of Sullivan Peak member contains *Saccinella*. This is about 100 yards west of the 733j locality.

March 18

737b M1867 - Beds with *Waagenoceras* and other Word fossils a few feet under The Cretaceous

737c M1867' - Smooth black ls weathering into humps with ammonites & fusulines. Humps weather ash gray certain ammonites: *Paracerasites* and ammonites with fine revolving lines. Same as seen with Turkish and forming top of Road Canyon

②

737d

Section of lip of hill all Road Canyon
M18672 Down back slope of hill there

must be about 20' of rock before

M18671

A

The ammonite bed. The latter are
agassizis 5-8' thick

28'

B

A = ammonite bed 8' ±

B = Heavy bedded ls mixed with

12'

C

some siliceous rock bedding
irregular some siliceous material

3'

D

Bed B. has about 15' beyond the
tip of the hill. Fusulines (M18672)

18'

E

Taken about 5' starting above edge
of hill & 10-15' below ammonite bed

6'

F

C - platy, siliceous, yellow shaly rock
about 12'; Top five feet covered. Also

10'

G

has considerable heavy bedded ls
lenses.

16'

H

D - 3' heavy band

I

65'

E - upper part mainly massive
bedded ls blocky granular separated
by yellow platy shale. Lower part
massive granular limestone from
which came M18673 = 737e

M18674

Cgl +

SSJ

J

F - covered.

G' - fairly granular block, ls
brown weathering - a

H 16' - Showing some massive
ls ledges

737e = M18673 - take 50' below top of
ledge in bed E

737f = M18674 Pennsylvanian at top of congl.

(3)

I - 65' of yellow siliceous shale and blue shale mostly on a covered slope.

J. Sandstone, brown and brown cgl filling valley and slope of hill opposite

Dick saw *Coelocrinophora* on the slope, undoubtedly from Road Canyon

Shale around tank that we saw some years ago is undoubtedly Leonard.

737g = M18675 - about 450 feet above house on road just at Y forming the loop to the windmill above the house at the head of the ravine. Road Canyon just above house but at ^{Road} Y corner the black, gray-weathering limestone with ammonites that forms the top of the Road Canyon. This is sandwiched between siliceous beds and is about 30 feet thick. Cross 2.5' of outcrop at top of knob.

737h = M18676 - uppermost heavy ls of Road Canyon on road 230 feet above the house

180 paces =

450' above house to Road Canyon just NW of house
Ammonites = 737i

230

180
59
115

11-7

(4)

Road canyon occupies the knob just NW of house it appears in road 280' above house and runs for 65 paces to the Y forming the loop around the windmill.

The combination of Road Canyon ls and Cathedral Mtn ss and cal has proved common in the area NW of Dugout Mtn. Apparently there is no full section of Word except at high hill with knob of Capitan

736X = M18678 - 4 blocks from 700v.

March 19

737j# M1967 - Started at first of low foothills in chain at base of Del Norte. Front of low hill (A) is composed of dolomitized massive conglomerate of large limestone pebbles and small siliceous pebbles. This may be the Sullivan Peak or possibly ls 2 (of King's Leonard). Back slope of knob is brownish orange siliceous rock followed by sandstone and shale.

A limestone, very sandy to conglomeratic 5-6' thick follows. From this we took numerous ammonites similar to those

737j from Leonard 2 or 3 of P.B.K. Above this limestone the rock is mostly silty-sandy

⑤

shale, rather soft and crumbly but culminating in a 30' sandstone yellowish and fairly hard. Between the ammonite beds and the sandstone there are alternations of shale and sand, the latter often containing fine-sized plant stems. Other than plants we saw no fossils in the sandstone.

Ravine above ss is debris choked but showed sandy shale and some sandstone. But at 127' above the sand came a cgl. for about 15' and then what appears definitely to be Cretaceous. Permian float occurs in the ravine, good limestone, some with silicified fossils.

- M1967Z
Cret.
- 10'± A Gully just N of one with thick ss.
- 40'± B A = Conglomerate with large masses of *Coscinophora* and other Permian. Possibly basal Cretaceous.
B covered
- 25-30' C C - Biohermal type beds with *Composita*, *Ediosites*, *Periclinurus*
- 10-12' D D - Mealy limy ss and sandy limestone with a few fossils
- E E Sandstone + shale, I guess that D is about 50' above the thick ss in the

(6)

rust gully South.

737K M19671 - Ammonite bed east of M1967

The knobs forming the front of the hills here have vertical bedding. About 75' of cgl. ls, ls pebbles & silicious pebbles up to 3 or more inches from the front 3rd of the hill. The middle 3rd is brown siliceous rock. & the last 3rd a limestone bed of 8 or 10' and vertical forms the backside of the hill. This ls is followed by more silicious beds but these are not vertical. They dip at a strong angle into the Del Norte. The front 1/3rd is all dolomitized.

732j - Appears on back slope of Hill running Valley. The Road Canyon appears as two limestones. The 732j is the very top of the second or uppermost ls. Just below the beds with *Columnaria* appear cobbly black limestone, weathering gray. This ls contains the same ammonites we have collected on the top of the Road Canyon in the exposures seen yesterday at the house and the locality to which we took Linnish & Linnish.

Ammonite
bed =

737-2

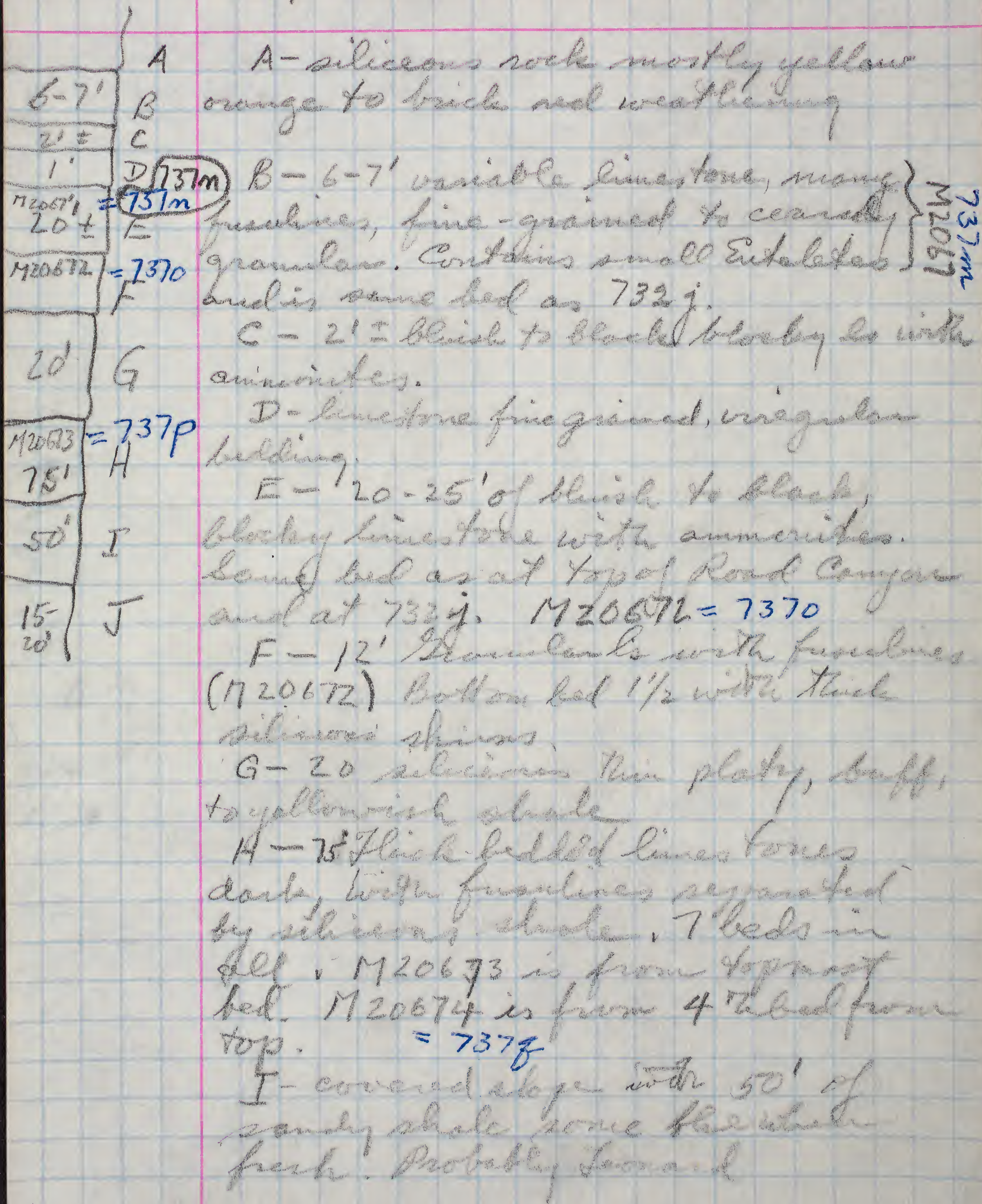
⑦ Remains on March 19, 67 - The vertical massive beds tipped up along the mountain front suggest Sullivan Peak. The beds are so dolomitized that we could not find any fossils in it. I was unable to find diagnostic brachiopods in the ammonite beds although we saw what looked like *Reniculanis* and a fragment *Trematospira*. This suggests Bed 3 of Kibby. The tipped up beds on the front might be bed 2 which has some biohermal material in it.

On the way up the Mountain we found a large *Crustitella* as float under the big sandstone but we could not find it in any of the limestones. I think the upper limestone is probably Wadsworth but can't be sure. *Edictia* was common in biohermal limestone and *Coscinopora* occurred just under or in the Cretaceous. The uppermost beds under the Cretaceous may be a basal conglomerate, certainly there was a variety of pebbles in the conglomerate.

⑧

March 20

M2067



(9)

T. Sandstone 15' - 20' of Cathedral
Mts.

M 20675 = 737R

Hill 4861 - S 55° W =

Hill old Payne R. - S 81° W

Top Dugout - N 70° W

Top of long spur with uppermost
orange cherty rock,
then 20'± of blue blocky ls. with
ammonites. Near top of Road
Canyon. Fossils in with Ammonites
come from 20' below top of RC.

R.C. at least 100' thick in several
ledges.

737.5

Remains bed = M 20676 - N 85° W -

Almost due west of new house on
road. From Knob 4861 it is S 50° W.

1000' west
of work
shed

About 1/4 mile west of work shed.
Dolomitic ls. with coarse
pebbles and abundance of
Ammonites

M 20677 - E side road about
1/2 mile S of new house
contact of Cretan word. sh. on
NW flank of hill with word SS
1' congl. between.

18

March 21

West end bluff ca $\frac{1}{4}$ E of creek junction, bluff opened by slide. About 50' up hill is sandy shale + ls. Then comes a 50' massive ls. Bottom of big mass of coarse cobbles. On top of mound comes limestone in beds up to 15" and thick-bedded chert, the chert 3-4' thick. Bedded ls 50' ±

M2167 - From loose blocks on slope just W of 728-2.

M21671 - lowest beds in Creek just west of 728-2 - yellow-weathering blue shale.

M21672 - Fusulines from a boulder in cgl. under bioherm at 728-2

M21673 - Loose piece with *crustikella* found at 728-2.

738g

M21674 - Loose piece 100 feet above bioherms.

Spent day at west end Clinatic hills. Collected four pieces from large *Leptodus* blocks. Sedichinella fairly common

(11)

as cracked material. Saw none
silicified. Silicification not
common in bioherms at west
end of Chinati hill.

Bioherms overlie egl. and
also at 50-100' of shale and
thin-bedded limestone in the
area from 728-2 and west.

March 22.

The loose specimens collected
in Chinati (728j?) are rather
from the Alta fl. than from the
Cibola. Our collection this year is

738h

M2267

738i

Sponge is M22671 - float on slope
under largest bioherm, first one
west of volcanic plug.

738j

M22672 - Porosia zone on slope
just west of large bioherm of M22
Slopes between 728-2 + M22. Thick bio.

738k

M22673 - about 25' below the
Liosotella bed.

738-l

M22674 - Beds with Liosotella
about 125' above the uppermost
bioherm.

738m

M22675 - About middle of thin-
bedded member of Cibola in a

(12)

Thick lenticular lime. M22⁴ + M22⁵
suggests Road Canyon.

738m

M22676 - About 50' below the
breccia or cgl. under the big
bioherms. Under bioherm just
E of the largest one and
west of the igneous plug.

739m

M22677 - Bioherms on hill east
of biggest bioherm.

Abolo fm - Udden 1400'

- 5 Yellow massive ls 650'
- 4 Thin bedded zone 450'
- 3 Spiracle zones 85'-160'
- 2 Lower Brecciated zone 133' - massive ls. & breccia
- 1 Transition beds 100' gyttzel sh., ss + ls

In morning went over slope west of
largest bioherm and slopes below
largest bioherm. In afternoon
collected some limestone at about
mid slope, about halfway up in the
"thin-bedded zone" exposed above the
bioherm just west of the largest one.
These contain a Tridacella that
looks to me to be a Road Canyon
one. Later in afternoon went on
a hunt for Bacchariella. We
started on slope just east of

(13)

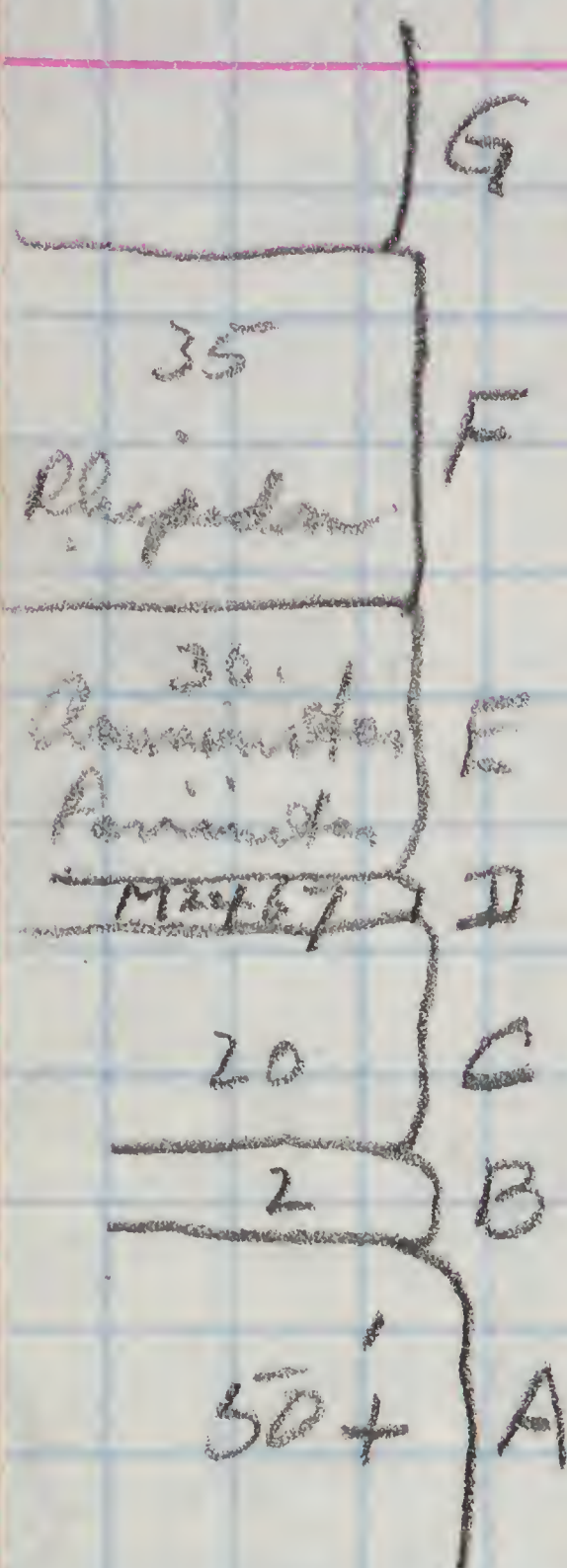
volcanic plug (Tig) one mile east of the west end of the Permian Dill. On this slope the bioherm is small but we found abundant Scaechinella in it. About 50' under this bioherm occurs the transition beds with a profusion of crinoid stems and other fossils. Large Heliospongia was found lower on the slope. We also found Scaechinella fairly common in the breccia beds. Also large fragments identified as Wolfcamp. The bioherms overlie these beds. The transition beds may be Leach Hills fm. whereas the Bioherms may really be Decie Ranch.

In the breccia forming the base of the largest bioherm we saw boulders with Scaechinella. One boulder, about 3-4' in one direction abounded in crinoid stems and Scaechinella and is identical to the crinoid-stem - Scaechinella beds seen in the next bioherm to the east mentioned above. These boulders were derived from the bioherms and are essentially contemporaneous with them.

(14)

March 23
Rain

March 24



On west side largest bioherm near gully collected beds with Institella!

- A = large bioherm
B = 2-3' of limestone granular coarse grained with long spicules
C = 20' ± orange brown chert also with spicules
D = Thin band of ls, 1/2-1' thick with occasional ammonites & brachiopods especially Institella. = M2467 = 7380
E = 30' of chert, yellow siliceous shale and occasional ls. band with occasional ammonite - one Perinites = M24671 = 738p
F = 30-35' of blocky calcarenite with occasional fossils. Small Rhipidomella seen and Perinites
G = Thin platy shale of laminated zone.

B-F = spicule zone and this must certainly be Leonard in age.

15

Up ravine past igneous plug 5.
Saw same section as elsewhere.
Went up thru thick bioherm with
brachiopods in lower part. Saw
no good silicified pieces. Above
the ls bed with spicules comes
thick chert capped by a sandbank
type bioherm with Perminites at
top. This is followed by the
thin bedded zone.

Spicule bed
ls 30'
chert
occasional
ls.
Bioherm

M 24672 = 7384 is 2 small pieces of
ls from between the chert and
the bioherm = basal spicule
bed. Contains some fossils.
Ammonites from top of spicule zone.

Between the spicule bed and
the bioherm is much rubble
from the bioherm.

Biggest bioherm is at north
bend of stream

7382 = M 24673 - Slope exactly 1/2 mile
E of the igneous plug - 3 blocks.

7385 M 24674 - 1 1/2 miles E of plug.
Near top of bioherm

738t M 24675 - Float from transition
zone, 1/2 mile E of volcanic plug.

738 U

M24676 - Perinides from limestone capping zone of spicules at loc. M2467.

738 V

M24677 - Perinides from limestone capping zone of spicules at locality 1 1/2 miles E of the plug.

738 W

M24678 - Just above base of spicule zone, just west of biggest bioherm.

The uppermost limestone 30' thick of the spicular bed makes hogbacks behind & above the bioherms.

The bioherms are semilenticular and have a generally uniform or nearly so thickness. They are based on rubble having enormous blocks 60 or more feet in one direction. Between them there is also much rubble. Just W of the largest bioherm the base of the spicule zone rests on the top of the bioherm but westward from the top of the bioherm the space between the largest bioherms & that next to it is filled by reef rubble. The surnes cutting the lower beds are on small faults or through the rubble. The basal beds of the rubble have large circular stromatolites.

Spicule bed

Reef rubble

Bioherm

17

as pebbles as well as pieces with large fusulines like those in the Transition zone. We found *Saccalinella* in the Transition zone and some of the *Saccalinella* blocks in the basal rubble of the brecciated zone may be derived from the Transition zone. Other *Saccalinella* blocks especially those with abundant crinoid stems. At the locality $1\frac{1}{4}$ east of plug found *Saccalinella* at very top of bioherm.

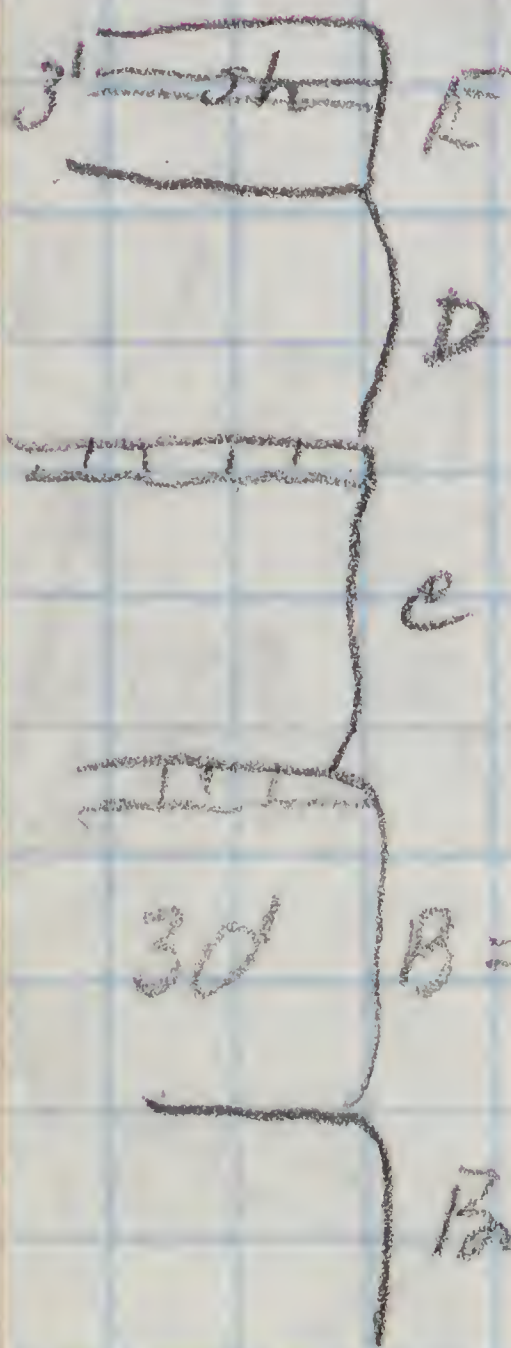
The spicule bed contains *Clathrella* near the bottom but I did not see it higher in the section. *Rhipidomella* occurs also in this bed and denotes Cathedral Mts.

Check R.E. King's *Shafter* species.

18

March 25 - Section next to mine

About 30' of heavy-bedded chert above gravel boulder bed of Brucina zone. Contains lenses of ls, one about 20' above base with *Xestozoa*. Heavy chert with lentils of ls. at top with ammonites.



C = 40' ± Thin-bedded shale &

30' B = chert with thin ls at top 3' ± ?

Brucina D = 40' of ^{paper} thin bedded sh with occasional ls bed, none very thick

739j

E - About 50' dark gray calcarenite with few fossils and these mostly broken. Some dark chert. Occasional *Richthofenids*

Above E comes cherty brown, thick bedded siliceous rock with papery siliceous shale. 20' + 100 paces = 250' + 20' more to a brecciated layer with considerable sand - makes a hump. E estimated at 160' - upper part E is sandstone. F = hump at 20' ± ? This might be Cretaceous.

(19)

No recognizable fossils in the bioherm but numerous ghosts of gastropods - look like *Bellerophon*. This stuff is almost certainly Cretaceous.

The biggest bioherm is $\frac{1}{2}$ mile west of the plug and just east of big bend in the creek.

738x

M25672 Fusulines from 6-8" bed about 30' (50' stratigraphically) below the dolomite of the yellow beds on hill facing ravine on W side of highest bioherm.

738y

M25673 - 10' below top of thick ls and 170' feet below the dolomite of the "yellow beds" on hill facing ravine on W side of highest bioherm

738z

M25671 - Fusulines from thick limestone in midst of thin bedded zone in hill above the highest bioherm.

20

March 26

Narrows of Cibola Creek - variegated red & yellow dolomite, a great reef mass overlying flat-bedded, blocky dark ls. weathering light gray. Forms a bluff about 175' at its highest in the narrows. Contact of reef & limestone irregular. We were unable to make out any major fault. Many minor displacements as one might expect on a reef. South end with cross-bedding. Reefs overlain by thin-bedded layers. We measured with 30° dip along creek about 240' total thickness of this part of the Cibola. Udden gave 650' but this seems excessive.

Look up C. P. Ross 1943 for specimens from The Chinle Mts.

The hill at the west end of The Permian Band looks to be about 400' high and the rock seems to spread out but we saw no unusual structure. At 72667 a 15-20' bed of ls comes to the stream level. This is full of fusulines and the limestone looks like The

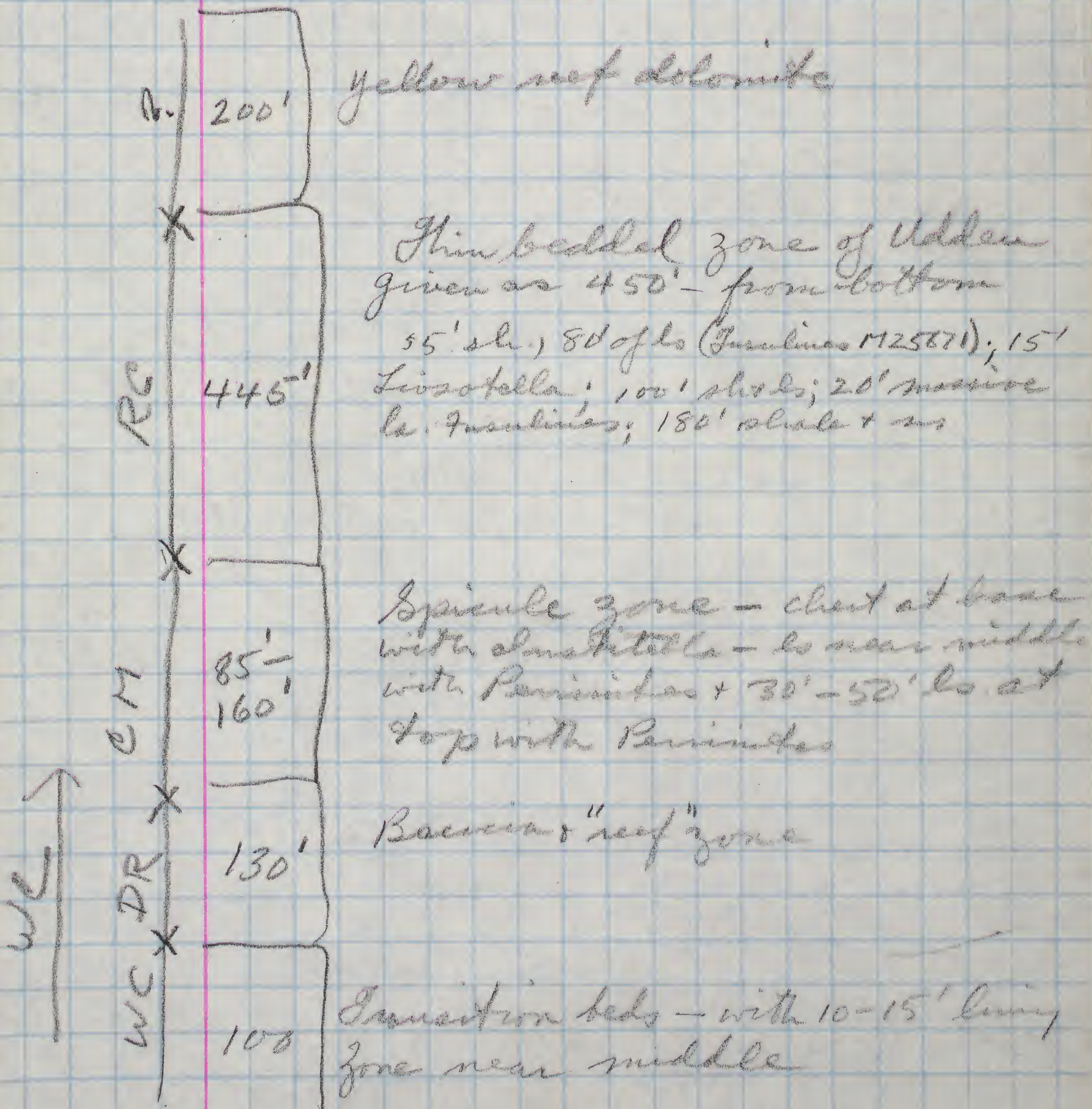
(24)

beds with fusulines and suggests
the fusuline bed at 1425873

On the west side of Cibola Creek
at the narrows is a small hill
possibly 100 feet high which
shows flat bedded blocky dark
limestone in layers of an inch
to nearly a foot, very hard
weathering light gray. This is
overlain by massive reef limestone
or rather dolomite. We saw no
fossils. This hill is exactly like
that across the creek where the
supposed thrust is located. The
dolomite is lithological like
that of the "yellow" beds. This is
a normal sequence and it
seems to me that both sides
of the creek are lined by the same
rocks.

The rough section of the
climatic sequence seems as
follows:

22



(23)

March 27

About 30' heavy-bedded chert
with ls lenses containing
fusulines - few other fossils
seen, none recognizable.

739a

739b

M2767 - lowest fusuline bed

M2767 - uppermost fusuline

bed. This is evidently the bed
mapped by King as dividing
the ~~Leaman~~ from the word. By
position it is Road Canyon
but we only have fusulines
to test this.

(24)

March 28.

Went out to Walpurg hills. Obtained permission to go on property and visited locality 727e for more blocks. The fossiliferous beds are part of a bioherm which underlies the flat-bedded upper part of bed 4. Perhaps this should be placed in bed 3. Although we took 5 blocks we got the only pieces showing Brachiopods.

March 29.

Hill 5250 is N 70° W

" 5021 " N 60° E

Coscinophora blocks are on end of contour line above M29. This should be checked on older maps. Coscinophora definitely out of place because I saw a block plastered on the north side of the hill definitely out of place.

737t =
M2967

M29 - Biohermal lumps or sand banks between the Pennsylvanian and the cgl. of the Huron Hills. These masses contain numerous fossils. Fimbriaria was common at this place. The fauna suggested that from locality 718 in Dugout Mtn.

12195

(25)

1729671 = 7374

None of hill having type section of Deane Ranch & just east of fault

I measured 49' from first or lowest cgl. ledge to lowest part of continuous cgl. Saw no bivalves above the continuous cgl. The slope distance was about 100'. These reefy bodies are mostly calcarenitic and may represent large sand banks. We were not successful in collecting because the rock is very fresh. Ammonites are abundant but we were unsuccessful in getting any good ones.

715b - This is the long slope adjacent to the ravine separating the high hill with type Deane Ranch from the low faulted block. Here the biohermal beds or rather rounded masses are scattered over the surface. These also have many ammonites but they seem unobtainable because of the freshness of the rock. Cgl. beds occur among them and cgl was seen in several levels at 14 & 9. The cgl has chert pebbles and is brown like that of the Lewis Hills.

(26)

March 30

706b is 0.7 mile east of middle of divide in Hess Canyon.

737w

It is Appel Ranch not Apple R. as we supposed and published.

The dolomite of The Skinner Ranch at 705a is about 75' above road at east end of hill facing Leonard Mtn. and descends nearly to road at 705a.

March 31 = 737v

M31 crustitella in Hess Lithology above a thick bed of small pebble cgl. Pebble cgl. over 5' thick. 25'-30' of Hess Lithology followed by yellow shale & bickers.

Evidently the Cathedral Mtn. small pebble cgl. is not a single unit. at M31 it is at least 5' thick but upward it appears & disappears as a unit of Hess Lithology. The great thickness of the Hess may be in part in the Cathedral Mtn.

(27)

March 30

706 b is about 0.8 mile east of the divide in Hens Canyon.

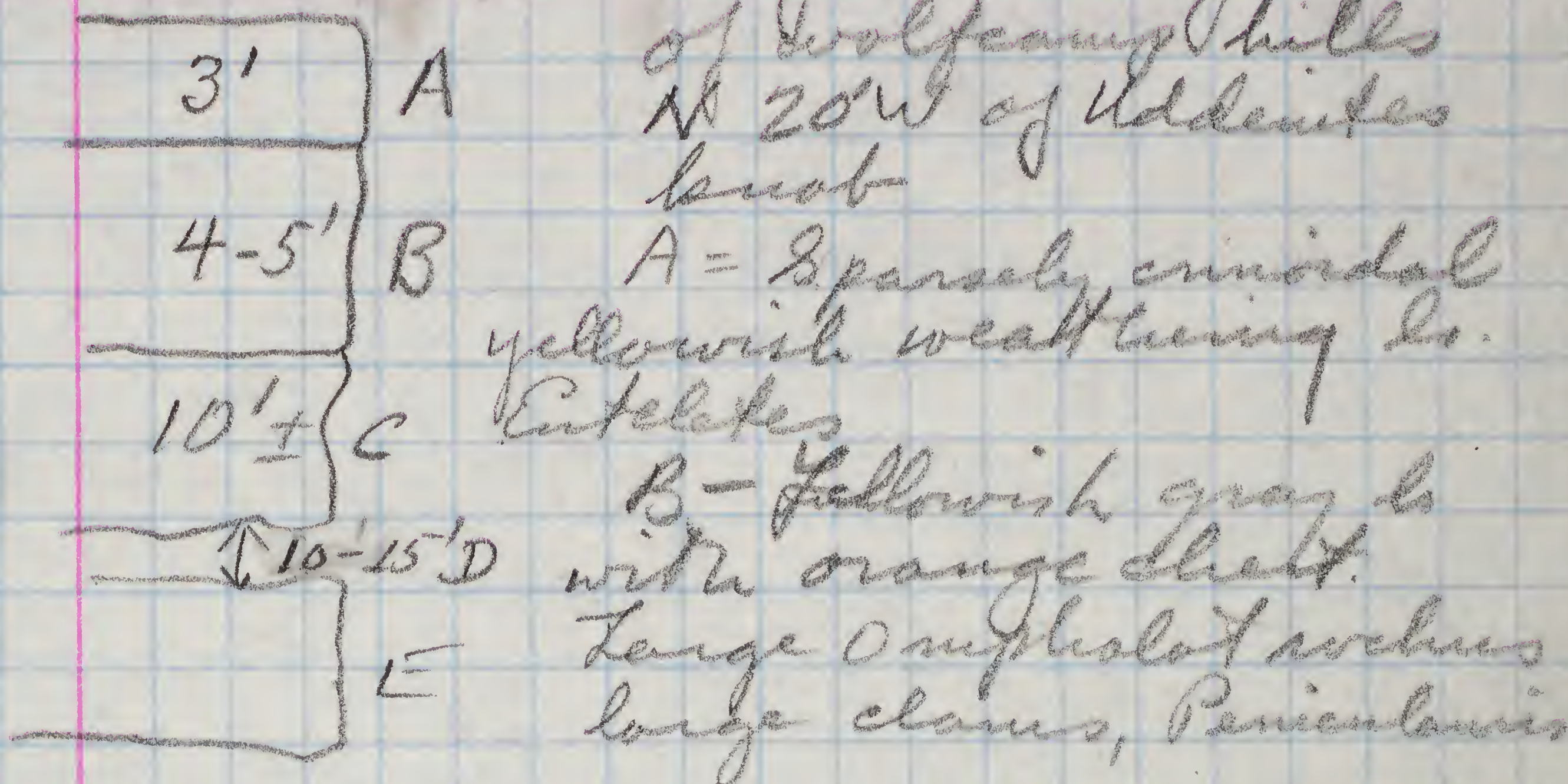
737w =

M30 is another small lens about 0.1 mile west of 706 b and about 100 yds N of the road.

M31 cont. It is a question whether the Cathedral with small pebble cgl. is actually a continuous bed. Another search for Amphipella failed to turn up any more pieces.

(28)

April 1 Taylor Ranch Member
N 45° W of middle of high knob
of Wolfcamp Hills
N 20° W of Uddenites
knob



C - cobbly limestone breaking into lumps and containing many fossils 10'±.

D - covered - mostly shale? or soft crumbly ls.

E - limestone gl.

739L = A1' - Fusulines at bottom of thick dolomite capping hill 75' below top of hill with road contour just N of hill 532'. This dolomite mass, I think, is the source of the Scaphinella found lower on the outcrop of Taylor Ranch.

5750
25
16

(29)

Be sure to check location A1
with my number for this place

April 2

Searched for *Waggoner* at
707a but did not find a trace
of one. Just under the capping
ledge of The Road Canyon comes
a limestone cgl. This appears on
the low narrow ridge from the
point of the spur from Subliman
peak about half way from end
of spur to crop of heavy beds.
This cgl. looks much like that
which underlies many of the
beds. The heavy cgl. seems
to disappear in the hill on the
west end of the Amphitheater on
the west side of the spur. The
Chonetes beds seem to be the
first fossils to appear commonly
after a long series of unfossiliferous
platy beds.

A2 = *Chonetes* beds.

(HK)

Limestone-pebble conglomerate; light gray, weathers gray, medium grained, thin bedded, mottled with brownish gray, silty Linnarssonella girtyi..... 0.4 67.8

DRY CREEK MEMBER - 67.8 feet thick.

Covered; green fissile shale and brown, thin bedded calcareous siltstone..... 67.8 0

PILGRIM FORMATION

Limestone; the top of the massive Pilgrim limestone is the datum from which all footages are measured.

(GC)

dy 30°
P.1

142
4
568

48
4
192
24
216

General back slope of key back
(is grey is like in ledge)
3 levels

form crest of key back
ammonites, sponges, bryozoa
→ is about blocks & sponges
blocky grey is ledge
12 levels

Very platy siliceous sh. tan
light grey ls. ledge
2 levels

blocky grey ls in 1 ft ledge, w 3-5 ft
with spicules) base of tan siliceous sh. between
10 levels

about ledge, 1 ft is at top — 3 levels
thin tan platy about — 5 levels

ls. hard, silicified brachiopods — 1 ft

thin platy, about 2 sp. thin — 2 levels + 2 ft

Muddy bioherm, not mag

00000

(HK)

pebbles, Angulotreta tetonensis, A. vescula, Dicellomus? mosaicus, Lingulella sp..... 0.9 86.5

Covered; probably shale and shaly limestone..... .7.0 79.5

Limestone; light gray, fine grained, very glauconitic, and coarse grained coquina with Angulotreta tetonensis, Billingsella perfecta, Taenicephalus galupensis, T. shumardi, Crinoid columnals..... 0.8 78.7

Parabolinoides subzone

Limestone; gray, fine grained, slightly glauconitic, and coarse grained brachiopod coquina with Angulotreta tetonensis, Billingsella perfecta, B. plicatella, Ceratreta hebes, Eoorthis remmicha var. A., Orygma sp. firma, O. llanoensis, Parabolinoides hebe, Simbaltea erylson.

1 step = 4'5"

Sept 30th
P 2

12204

34/65/151

Concave base of back-slope

ledge at top of high hogback
yellowish gray massive calcarenite
25 levels to crest
of hill.

— 42 levels

M 25.67 (2) is 10 levels below

tan platy siliceous shale
w/ beds of gray fine gr.
ls. & dolomite (tan) & chert beds

— 40 levels

massive gray ls. ledge
calcarenite w/ many siliceous fossil frags

10 ft below top — 4 levels
M 25.67 (3)

← fossiliferous near top M-25-67 (1)

partly concave slope of thin bedded
gray ls ^{fine grained} w/ patches of tan dol. (Liosotella bed in middle of interval)

— 22 levels

capped by gray ls w/ chert
reddish brown ledge, dolomite

— 3 levels
Liosotella at base

thin ^{bedded} gray ls w/ thin interbeds of tan shale

— 20 levels

tan papery thin
siliceous shale w/
2" or 3" stringers of
gray ls (lying on Ammonoite bed of P. 1)

— 11 levels 48'

30

April 3

A = Cretaceous
B = 45' of slope, possibly 60'
of sandy limestone with occasional
fossils, brachiopods, *Cerithium*
yellow platy shale in lower 10'
C - 65' of slope with yellow
siliceous shale with 10' sandy ls.
at top which is probably a local
lens.
D - 3 or 4' fusulinid detrital
limestone with *Collumatus* = 7374
E - 2-3' ± Blue cobbly ls with
Road Canyon ammonites = 739d
F - 15' of slope possible 20'
of limestone, discontinuous, some
fossils
G - 27' of slope in yellow
siliceous shale
H - 20' of slope yellow siliceous
shale and scattered ls beds with
a thin 5' layer at the top. A 35
fusulinids = 739e
I - 30-35' of bihermal
limestone with *Coccinophora*
Cobbly basal beds.
J - covered
K - base of section - sandstone

739h = A3'
60' ±
Ammonites
A3' = 7372
Lime
4' A33
23' A34
20' ±
30-40'
25' A35 = 739e
I
J
K

61.9

(21)

1 mile from road; 2 1/2 miles
from old Payne R.

739f = A3⁶ - Low hill at base of mtn.
Dark thin beds of calcarenite in
siliceous shale. Looks like Skinner
Ranch.

733j - Took one block of Crinophora
Saw Scaphinella a little lower
down from the Crinophora.

Location of bioherm beds
at base of Reed Canyon at
A3.

On Dugout Mtn. N75°E = S75°W

Hill 4861

N15°E = S15°W

Highest hill with

Wood capped by Capitan N5°W = S5°E

(32)

Blocks

| | | | | |
|----------|------------|-----------|-----------|-------------------------|
| | 733 i | - - - - - | 4 | |
| | M1867 | - - - - - | 3 (small) | |
| | M18678 | - - - - - | 4 = | |
| | 732 i | - - - - - | 8 | |
| clinatis | { 728 i } | - - - - - | 4 | } sent from Maya |
| | { M24673 } | - - - - - | 7 | |
| | 727 e | - - - - - | 5 | |
| | 706 e | - - - - - | 1 | |
| | M30 | - - - - - | 1 | |
| | 721 u | - - - - - | 4 | |
| | 728 p | - - - - - | 8 | } sent from Van Horn |
| | 725 g | - - - - - | 2 | |
| | A7 f | - - - - - | 2 | |
| | | | <hr/> 53 | |

| | | |
|------|-----------------|------------|
| Sent | 14 bundles from | Maya |
| " | 49 | " Marathon |
| " | 14 | " Van Horn |
| | <hr/> 77 | " |

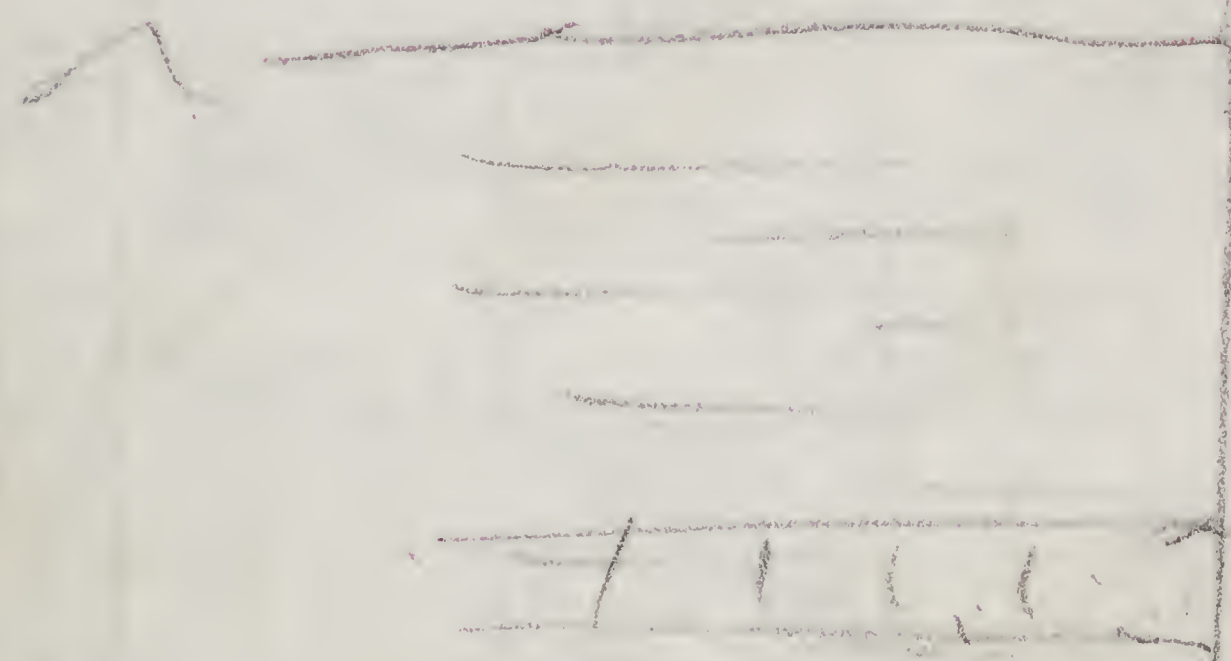
| | | | |
|-------------|-----------|----------|------------|
| 728 p = | 700 | Maya | 1350 lbs. |
| 725 g, A7 = | 480 | Marathon | 4770 " |
| Boxes = | <hr/> 200 | Van Horn | 1400 ± |
| | 1350 | | <hr/> 7670 |

S. ...

40 fms.
450'

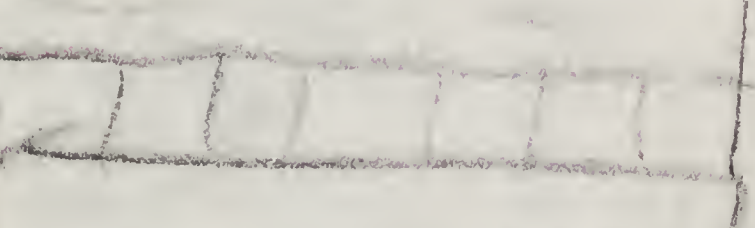


Lenox Hills



Neal Ranch

Knappa



Uddenites
zone

A3³ }
A1¹ } 2

A3¹ } 4

Gaptank

M1767
M30671
A3675
A3676